

REMARKS

In response to the Office Action dated April 12, 2007, the Applicants hereby request reconsideration of the pending claims in light of the amendments above and the following remarks.

STATUS OF CLAIMS

Claims 1-22 as originally filed were pending.

Claims 1-22 are amended, and are before the Examiner for consideration.

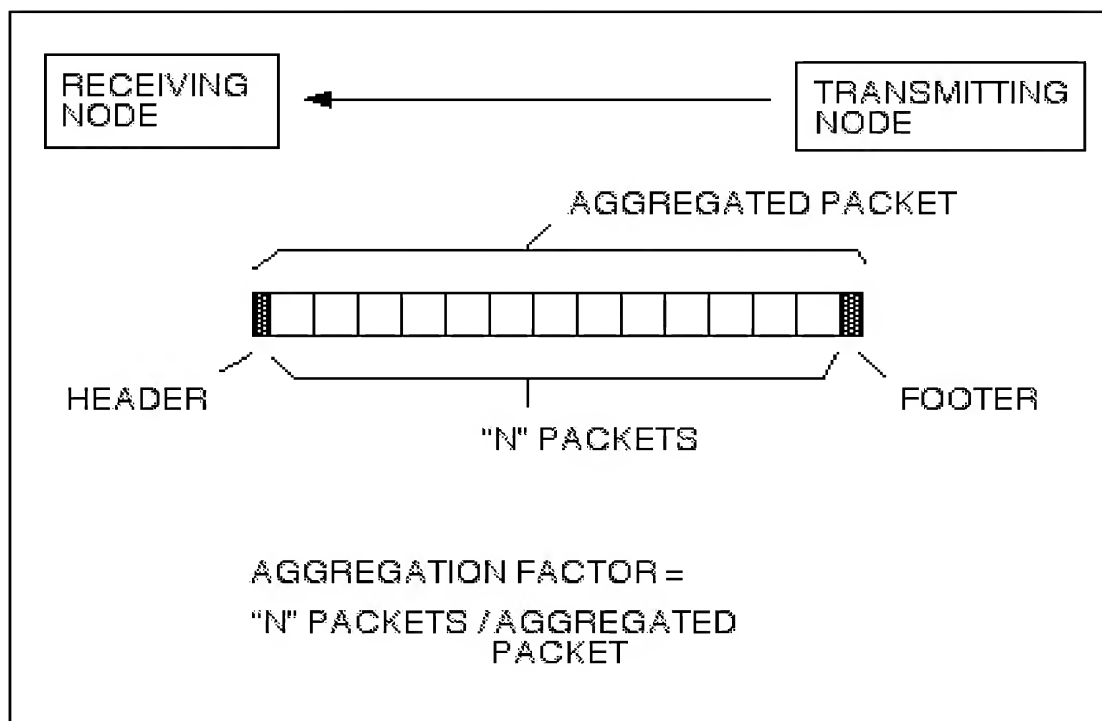
CLAIM REJECTIONS AND OBJECTIONS

In Section 1 of the Office Action, claims 15-22 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 15-22 have been amended, and are believed to be directed to statutory subject matter.

In Section 2 of the Office Action, claims 12-14 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which is regarded as the invention. Claims 12-14, as amended, are believed to avoid the offending language noted by the Examiner.

In Section 3 of the Office Action, claims 1-8, 10-15, 17, 18, and 20-22 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 7,002,993 to Mohaban et al. ("Mohaban"). Additionally, in Section 4 of the Office Action, claims 9, 16, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mohaban in view of U.S. Pat. No. 6,839,356 to Barany et al. ("Barany"). In view of the claim amendments above, Applicants hereby traverse the stated rejections, since neither Barany nor Mohaban show all the elements and limitations of the claims as amended, either alone or in combination.

To explain further, as shown in the sketch below, the invention generally relates to packet-based communications, and more particularly, to packet aggregation.



In a packet-based network, data streams to be transmitted over the network are broken into a plurality of discreet data packets, which are formatted according to the network's communication protocols. The packets may travel over several different communication pathways to reach the receiving equipment, whereupon the packets are reassembled to reconstitute the original data stream. Packet data networks are further discussed in Sections 4-8 of the present application. (Section references are to the published version of the present application, Pub. No. 20040264454.)

As explained in Section 18 of the application (and elsewhere), for packet aggregation, a number of standard data packets are aggregated into an aggregated packet, for transmission from a transmitting node to a receiving node. At the receiving node, the aggregated packet is de-aggregated into the original packets, which are further processed in a standard manner. The size

of an aggregated packet is directly proportional to the number of standard packets in the aggregated packet, which is based on an aggregation factor "N" (see Sections 24-29). For example, if $N = 2$, then there are two packets in the aggregated packet, if $N=3$, three packets, and so on. Thus, generally speaking, the size determination governs the number of packets "N" to be included in the aggregated packet during the aggregation process.

Regarding the manner in which "N" is determined, as indicated in Section 25, "[t]he aggregation factor can depend on a plurality of parameters such as current channel conditions, the delay (between packets) that is acceptable to the user, the data rate capability of the system and the current loading of the system. The parameters on which the aggregation factors depend are referred to as user service requirements." As also explained in Section 27, "the value of N is determined based on various factors at the start of communications for a particular user. The various factors include the state of some of the aforementioned resources; i.e., amount of transmission power available, data rate available, amount of coding used, type of modulation used, amount of bandwidth available."

In the present invention, instead of the size determination (e.g., the determination of "N") being carried out in isolation at the transmitting node/equipment or otherwise, aggregated packet size is based on a negotiation between the transmitting node and the receiving node. In particular, keeping in mind that the size determination is based on one or more user service requirements, it may not be possible for the transmitting node/equipment to ascertain all the user server requirements of interest by itself. Thus, the transmitting node communicates with the receiving node for exchanging information relevant to the user service requirements, and thusly to the size determination. As stated in Section 28, "any equipment (mobile or base station) that can transmit aggregated packets will have the capability to negotiate with other equipment for the determination of parameter N." "The negotiation is based on current system conditions, resources currently

available, and the quality of service to be given to the received information....”
Section 38.

Thus, as should be appreciated, the present invention involves basing the size of an aggregated packet on user service requirements (e.g., current channel conditions, acceptable packet delay, the data rate capability of the system, and current system loading) through a negotiation between the transmitting communication equipment and the receiving communication equipment. In other words, aggregated packets are generated based on user service requirements criteria, as facilitated by way of negotiations/communications between the transmitting and receiving equipment.

The pending claims have all been amended to recite the aforementioned features. Based on Applicants' review, none of the prior art references of record show or suggest such features, either alone or in combination. For example, Mohaban relates to aggregating multiple media data packets for improving bandwidth efficiency, where the aggregated packet has a particular format and utilizes RTP (real-time protocol) segments. (See Mohaban, Col. 3, lines 34-49.) Generation of the aggregated media packets is a standalone operation, and in any event does not involve considerations of user service requirements or negotiations/communications between the transmitting and receiving equipment. Similarly, the Barany patent relates to VoIP datagrams, and not to generating aggregated data packets based on user service requirements through a negotiation between transmitting and receiving equipment.

Because Mohaban fails to show each and every element and limitation of claims 1-8, 10-15, 17, 18, and 20-22 as amended, it is respectfully submitted that these claims are not anticipated by Mahaban under 35 U.S.C. § 102(e), and, therefore, that these claims are allowable. Claims 9, 16, and 19 are believed allowable as depending from allowable base claims, and

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further because Mohaban and Barany fail to show the additional elements recited in these claims, as newly added by way of the amendments above.

CONCLUSION

In view of the foregoing, it is respectfully submitted that pending claims 1-22 are in condition for allowance, and action to that effect is earnestly solicited.

No fees are believed due for the present submission. However, authorization is hereby given to charge any fees owed to our Deposit Account No. 13-0235.

Respectfully submitted,

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